

The United States hereby submits this Status Report as required by the Court’s Order entering the Consent Decree dated April 1, 2022 (Dkt. No. 47), as modified by the Court’s Order dated May 31, 2022 (Dkt. No. 50). This Status Report contains information regarding Clean Air Act (CAA) issues at the Heritage Thermal Services, Inc. facility in East Liverpool, Ohio (Heritage Facility).

On October 18, 2018, the United States filed a Complaint against Heritage Thermal Services, Inc. (Heritage) alleging CAA violations at the Heritage Facility and lodged a proposed Consent Decree with the Court. (Dkt. Nos. 1, 2). On April 1, 2022, the Court entered the Consent Decree. (Dkt. No. 48). The same day, the Court issued an Order (Dkt. 47) requiring the Parties to file Status Reports every ninety days. At the Parties' request, the Court modified the due dates of the Status Reports to be August 15, November 15, February 15, and May 15 of each year. (Dkt No. 50).

## **B. Relevant Statutory and Regulatory Provisions**

Pursuant to Section 112(d) of CAA, EPA issued maximum achievable control technology (MACT) regulations that apply to the Heritage incinerator (Incinerator) and are codified at 40 C.F.R. Part 63, Subpart EEE (§§ 63.1200-1221) (hereinafter the HWC MACT). The HWC MACT requires Heritage to limit emissions of numerous pollutants including Total Hydrocarbons (THC). *See* 40 C.F.R. § 63.1219. The HWC MACT also requires Heritage to comply with facility-specific operating parameter limits (OPLs) that are surrogates for other HWC MACT emission limits and standards based on testing that Heritage performed. *See* 40 C.F.R. §§ 63.1209(j)-(o). The HWC MACT requires compliance with all OPLs, and deviation from an OPL constitutes a violation of the standard and/or emissions limit that the OPL is designed to ensure. *See* 40 C.F.R. §§ 63.1206(c)(2)(v)(A)(2), 63.1207(j)(1)(ii), and 63.1210(d)(2). Heritage must comply with the HWC MACT emissions limits and OPLs at all times except: (1) during periods of startup, shutdown, and malfunction; and (2) when hazardous waste is not in the combustion chamber. *See* 40 C.F.R. §§ 63.1206(b)(1); 63.1206(c)(1).

## **C. The Heritage Facility**

Heritage owns and operates the Heritage Facility that burns hazardous wastes. In the incineration process, liquid and solid hazardous wastes are exposed to high temperatures in a rotary kiln that generates slag and flue gas, which move into a Secondary Combustion Chamber (SCC). Hardened combustion remains (called clinker) can build up on the SCC walls and ceiling after multiple incinerations. Ultimately, the clinker dislodges and falls into a quench tank at the bottom of the SCC (known as a clinker fall event). When the hot mass strikes the water, a rapid expansion of steam can occur and increase pressure within the Incinerator, resulting in exceedances of the SCC Pressure OPL and sometimes exceedance of THC emissions and other OPLs. In addition, Heritage has frequently experienced combustion upsets, equipment and

instrument breakdowns, customer packaging issues, feed lance pluggings, and ash buildup in the Electrostatic Precipitator (ESP) (which is part of its emissions control system), resulting in exceedances of the THC emissions limit and OPLs. Heritage claims that most of these exceedances are malfunctions and therefore not violations of the HWC MACT, but EPA disagrees that many are malfunctions. *See* Declaration of Linda Rosen, Dkt No. 52-1 (Rosen Decl.) ¶ 11.

#### **D. Violations Alleged in the Complaint**

The Complaint alleges that from November 24, 2010, to June 14, 2018, Heritage violated several HWC MACT provisions. *See* Dkt. No. 1. The key violations concerned Heritage's violation of THC emission limits and the SCC pressure OPL. Many of these violations were attributable to clinker fall events and combustion upsets and resulted in severe THC emission and OPL exceedances in violation of the HWC MACT.

#### **E. The Consent Decree**

The Consent Decree has numerous provisions and requirements designed to address Heritage's non-compliance with HWC MACT emissions limits and OPLs, including measures intended to decrease the frequency and severity of clinker fall events and combustion upsets. The key requirements are discussed in Section II below.

### **II. CURRENT STATUS OF HERITAGE COMPLIANCE WITH KEY CONSENT DECREE AND HWC MACT REQUIREMENTS AT THE HERITAGE FACILITY**

#### **A. Heritage Compliance with the Emission Limits and OPLs in the HWC MACT**

As noted above, the HWC MACT requires Heritage to comply with various emission limits or OPLs that are templates for such limits. *See* 40 C.F.R. §§ 63.1206, 1209-10, 1219. Paragraph 13 of the Consent Decree also requires that Heritage comply with HWC MACT emission limits and OPLs.

Based on reports that Heritage submits to Ohio EPA pursuant to its CAA Title V operating permit issued by Ohio, and the Revised MACT Investigations (RMIs) it has submitted to EPA since the Consent Decree was lodged, it appears that Heritage's compliance with key HWC MACT requirements has improved since the Consent Decree was lodged. The following Table summarizes exceedances of the HWC MACT THC limit, SCC Pressure OPL, and other OPLs at the Heritage Facility for each semi-annual period since October 19, 2018 (the date the Consent Decree was lodged with the Court). As the table indicates, Heritage has asserted that many exceedances were caused by malfunctions and so exempt from the requirements; EPA disagrees with many of those assertions. *See* Rosen Decl. ¶ 11.

<b>Date Range</b>	<b>SCC Press. Exceed.</b>	<b>THC Exceed.</b>	<b>Other OPL Exceed.</b>	<b>Total Exceed.</b>	<b>Total Malfunctions Claimed by Heritage</b>	<b>Malfunctions Confirmed by EPA</b>	<b>Violations</b>
10/19/2018-12/31/2018	1	11	2	14	12	0	14
01/01/2019-06/30/2019	12	38	12	62	55	4	58
07/01/2019-12/31/2019	5	27	33	65	60	26	39
1/1/2020-6/30/2020	6	37	9	52	43	1	51
7/01/2020-12/31/2020	2	43	16	61	55	8	53
1/1/2021-6/30/2021	6	22	10	38	35	9	29
07/01/2021-12/31/2021	5	21	14	40	35	12	28
01/01/2022-06/30/2022	8	12	15	35	33	4	31
7/01/2022 – 12/31/2022*	2	0	5	7	6	1	1
01/01/2023-06/30/2023	7	14	27	48	47	20	28
07/01/2023-12/31/2023	5	7	15	27	20	8	19
01/01/2024-06/30/2024	3	17	8	28	19	2	26

\*During this reporting period, the Facility was only in operation from December 16, 2022-December 31, 2022.

\*\* EPA will provide Heritage the opportunity to discuss the RMIs before making a final determination.

Although violations of the HWC MACT at the facility have declined since implementation of the Consent Decree requirements, they continue to occur at unacceptably high rates. Attachment 1, DeFranco Declaration at ¶ 9. Substantial improvements will be needed at the facility to decrease the number of violations that continue to occur. *Id.* at ¶ 10. Heritage plans to install a soot blower and a shredder. If properly designed, installed, and operated, this equipment is expected to reduce violations significantly. *Id.* at ¶ 11. The United States will continue to assess the number and trend of violations at the facility, including how Heritage's use of the new equipment affects violations.

On August 2, 2024, the United States demanded payment of \$404,000 in stipulated penalties under the Consent Decree. This included stipulated penalties for THC emission exceedances, SCC pressure exceedances and other OPL exceedances through June 2022, and deficient revised MACT investigations through June of 2023. *See* Attachment 2. Heritage paid the demanded stipulated penalties on August 7, 2024. The United States will continue to assess compliance and assess additional penalties as appropriate.

## **B. Compliance with Key Consent Decree Provisions**

### Conduct of Revised MACT Investigations and Submission of Revised MACT Investigation Reports.

Paragraphs 15-22 of the Consent Decree require Heritage to undertake a revised MACT investigation (RMI) of all "MACT Exceedances;" defined as any exceedance of the THC emissions limit or non-compliance with an OPL. (*See* Consent Decree ¶¶ 8, 14). The Consent Decree requires Heritage to analyze and identify the cause of the non-compliance, evaluate corrective measures that could address it, and implement any corrective measures that are "reasonable under the circumstances." (*See* Consent Decree ¶¶ 17, 19). While the HWC MACT

requires investigation into such events, the Consent Decree RMI components are more extensive. Heritage is required to describe the RMI results, including causes and corrective measures, for each exceedance in a detailed report to EPA (called an RMI Report) on which EPA may comment and require changes. (*See* Consent Decree ¶¶ 17, 19-20). The Consent Decree provides deadlines for performance of the RMIs and requires Heritage to submit the RMI Reports to EPA on a quarterly basis. (*See* Consent Decree ¶¶ 19-22). Under Paragraph 22 of the Consent Decree, EPA may require Heritage to evaluate or implement certain corrective actions.

However, as noted in the United States' prior status reports to the Court (Dkt. 52), EPA does not believe that Heritage's conduct of some of the RMIs and RMI reports in prior reporting periods satisfied all Consent Decree requirements. Specifically, while the RMIs contained some of the information required by the Consent Decree, many of the RMIs appeared to lack either sufficient root cause analyses or adequate evaluation of potential corrective actions. *See* Dkt. No. 52-1 ¶¶ 9-10.

EPA has been working with Heritage to improve its root cause analyses and corrective action evaluations. *Id.* ¶¶ 9, 11. On September 29, 2022, EPA wrote Heritage a letter detailing the deficiencies in its RMIs and its evaluation of root causes and corrective actions. It outlined the necessary next steps Heritage must take to include sufficient information about the causes of the exceedances and potential corrective measures in future RMIs. Dkt No. 53-1 ¶ 7. At an April 2023 meeting between the parties, EPA, DOJ, and Heritage also discussed the deficient RMIs. *See* Dkt No. 71-1, ¶ 5-6. The parties discussed at length the expectations for what should be included in the RMIs. *Id.* The stipulated penalties demanded and paid include stipulated penalties for prior deficient RMIs. *See* Attachment 2.

Most of Heritage's RMIs from the third quarter of 2023 to present have met the Consent Decree requirements. Dkt. 73-1, ¶ 10; 75-1, ¶ 5; 76-1, ¶ 8. One RMI conducted during the second quarter of 2024 had an insufficient root cause analysis. DeFranco Declaration, ¶ 8. EPA will continue to discuss the underlying incidents with Heritage to make final determinations regarding whether each incident was a malfunction or violation.

#### Waste Stream Acceptance Procedures

##### Rejection of Certain Refinery Waste

Paragraphs 24-25 of the Consent Decree require that Heritage reject any refinery wastes that potentially contain more than 0.124% lanthanum. These wastes likely contributed to major clinker fall episodes. Beginning before lodging of the Consent Decree, Heritage ceased accepting refinery wastes that had potential to contain more than 0.124% lanthanum. The United States is unaware of any instances since the lodging of the Consent Decree where Heritage has accepted wastes potentially containing more than 0.124% lanthanum.

##### Supplemental Waste Acceptance Protocol

Paragraph 28 and Appendix 4 of the Consent Decree require Heritage to implement a Supplemental Waste Acceptance Protocol (SWAP) to reduce THC exceedances. The SWAP imposes more stringent requirements than the current Waste Analysis Plan required by Ohio regulations, such as increased inspection and sampling of hazardous waste prior to incineration. The Consent Decree requires that Heritage implement the SWAP for six months and evaluate whether the average number of monthly THC exceedances decreased to 5.2 or fewer during that time period (reflecting a 20% decrease from a baseline period), in which case it shall permanently implement the SWAP and have its requirements included in the Facility's Title V permit.

Heritage began implementing the SWAP in late 2020 and reached full implementation in July of 2021. *See* Dkt. 43-1. Heritage's reports indicate that THC exceedances dropped to less than 5.2 during the first six months of full SWAP implementation. EPA concurs with Heritage's analysis. Rosen Decl. ¶ 14 found at Dkt.52-1. Heritage applied for an amendment to its Title V permit to incorporate the SWAP. In reviewing the proposed Title V amendment, EPA determined that not all required elements were included in the application. Dkt. 71-1, ¶ 19. EPA reviewed a draft resubmission, and after discussion and revisions to ensure the permit application contained the Consent Decree-required language, Heritage resubmitted the permit application to Ohio EPA on October 19, 2023. Dkt. No. 73-1, ¶ 20.

#### Feed Balancing Protocol

Paragraph 27 of the Consent Decree requires Heritage to develop a feed balancing strategy (FBS) that would balance and alternate the feeds of the fluxing elements in order to steady sloughing of slag from the SCC walls to reduce MACT Exceedances due to clinker falls. The Consent Decree requires Heritage to implement the FBS for six months and then evaluate whether the number of SCC pressure exceedances (which are associated with clinker falls and often result in excess emissions and OPL deviations) declined more than 20% during this pilot period from the number in a baseline period. If so, Heritage is required to permanently implement the FBS (and add it to its Title V permit) (Consent Decree ¶¶ 28, 50).

In late 2020, Heritage developed the FBS and began fully implementing it in July of 2021. *See* Dkt. 43-1 ¶ 5. Heritage has reported to EPA that during the initial six months of implementation the number of SCC pressure events declined more than 20% from the number in the baseline time-period. EPA concurs with this conclusion. Rosen Decl. ¶ 14, found at Dkt. 52-1. Heritage applied for an amendment to its Title V permit to incorporate the FBS. In reviewing the proposed Title V amendment, EPA determined that not all required elements were



included in the application. EPA reviewed a draft resubmission, and after discussion and revisions to ensure the permit application contained the Consent Decree-required language, Heritage resubmitted the permit application to Ohio EPA on October 19, 2023. Dkt. No. 73-1 at ¶ 20.

### Performance of the SEP

Section VII and Appendix 5 of the Consent Decree requires Heritage to spend at least \$302,500 in performing a lead hazard abatement Supplemental Environmental Project (SEP). For the project, Heritage was required to remove and/or replace lead-laden features (*e.g.* windows and water supply pipes) at nearby properties where the owners cannot afford to undertake lead abatement. The properties were required to be residences, schools, and day care centers, or other properties intended to be demolished in residential areas, or otherwise proximate to schools or day care centers, where lead abatement activities will demonstrably minimize potential exposure of children to lead. On January 24, 2024, Heritage provided a report to the United States certifying that it had completed the SEP. On February 20, 2024, EPA notified Heritage that it had satisfactorily performed the SEP.

### **III. ADDITIONAL MEASURES TO IMPROVE COMPLIANCE**

#### **Evaluation of Facility and Process Improvements to Improve Compliance**

At an April 2023 meeting between the parties, Heritage committed to identifying additional measures beyond those required in the Consent Decree for evaluation and potential implementation at its facility that would further reduce emission exceedances and OPL violations. *See* Dkt. No. 31-1 at ¶ 14. On May 11, 2023, Heritage informed DOJ and EPA of two measures it wished to evaluate and potentially implement.

The first project identified is a sludge loop project. *Id.* at ¶ 15. This involves fabricating a new circulation loop and delivery system from the tank farm to the kiln. *Id.* According to

Heritage, the loop allows for a more controlled flow of material during loop startup as well as during continuous operation, resulting in fewer unexpected spikes of material through the lance into the kiln that could lead to incomplete combustion events. *Id.* Heritage has informed DOJ that it has installed and is operating with the sludge loop.

The second additional measure Heritage will implement is installing a waste shredder. *Id.* at ¶ 16. The shredder will take containerized waste and shred it into bins that will then be managed through the bulk solids feed mechanisms. *Id.* According to Heritage, the new process will allow it to enhance the control of waste feeds into the kiln and could also allow for mixing higher BTU (British Thermal Unit, a measure of heat) materials with lower BTU materials. *Id.* Some containers have potential challenges being fed in whole or in part. *Id.* A shredder will give Heritage another option for managing these containers. *Id.* Heritage estimates that the shredder will likely be installed by the end of 2024. DeFranco Declaration at ¶ 12.

EPA has also had discussions with Heritage about implementing further measures to reduce violations. Heritage submitted additional information in January 2024 regarding several projects that will potentially be implemented at the facility. Dkt. 75-1, ¶ 9. These include a soot blower system that is intended to prevent clinker from forming on the walls of the SCC and thus reduce clinker falls. It also includes a system to automate the process for detecting cooling system leaks and maintaining coolant in the front wall cooling system. This is intended to reduce the severity of the type of exceedance that occurred in July 2023 when a coolant leak in the kiln caused a THC exceedance. *Id.* Heritage has installed the front wall cooling system, and has begun the process of installing the soot blower, with completion of the soot blower system installation expected by the end of 2024. DeFranco Declaration at ¶ 12.

### **Testing and Establishment of New Operating Parameter Limits**

EPA sent a CAA 114 request requiring Heritage to create a test proposal to establish new OPLs in February 2021. *See* Dkt. 71-1, ¶ 16. The new OPLs are intended to ensure successful combustion so that emissions are within the limits of the HWC MACT. Establishing new OPLs requires performance testing, specifically a Destruction and Removal Efficiency (DRE) test. Between February 2021 and 2023, the parties discussed various test protocols proposed by Heritage. On March 9, 2022, pursuant to its authority established in 40 C.F.R. § 63.1209(g)(2), EPA ordered Heritage to comply with a new OPL consisting of a maximum container feed rate of 1.416 MMBTU per container. *See* Dkt. No. 43-1 Attachment 1 at 4 (EPA March 9, 2022 letter to Heritage). This required Heritage not to feed any containers that have a heat value exceeding 1.416 MMBTU, but to repackage such waste into multiple containers or feed it in a different form. *See id.* This interim OPL became effective on June 9, 2022, and remained in effect until new permanent OPLs based on an EPA-approved test were established.

On February 28, 2023, Heritage submitted a DRE test protocol to EPA, which EPA approved on March 16, 2023. *See id.* at ¶ 18. Heritage completed the DRE test in June and submitted a report of the test on September 6, 2023. Dkt. No. 73-1, ¶ 21. The results of the DRE test were used to set six new OPLs. *Id.*

### **SUMMARY**

EPA continues to review Heritage's compliance under the Consent Decree. The United States has demanded \$404,000 in stipulated penalties for THC and OPL violations and conducting deficient RMIs, which Heritage has paid. The United States will continue to review compliance and assess additional penalties or take other enforcement action as appropriate. It

will also evaluate whether additional changes are needed to achieve compliance with the HWC MACT.

Respectfully submitted,

s/ Lauren D. Grady

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